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ABSTRACT

The annotated titles in this bibliography are intended to introduce the novice to current or significant work on the application of cognitive psychology methodologies to the writing process. The bibliography is arranged in four sections: (1) an overview of the topic that includes anthologies, essays and papers; (2) relevant publications of Linda Flower and John Hayes, the specialists in the area to date; (3) a representative sample of applications, models, and continuing research; and (4) evaluative articles on the approach in general. (HTH)

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COGNITIVE APPROACHES TO WRITING: AN INTRODUCTORY ANNOTATED BIBLIOGRAPHY

Beginning in 1977, the methodology and analytic devices used by cognitive psychologists were applied by researchers of writing processes in their efforts to plumb the depths of the activities underlying composing. Janice Lauer (annotated below) introduced the idea to the profession as early as 1970, but it took some time for research in writing to catch up to the work of cognitive psychology. Much of the work done since 1977 appears complicated and perhaps overly-formal to the novice.

It is the intent of this bibliography to provide the novice with a collection of articles, essays and papers that will offer a sampling of the work that has been and is currently being undertaken. It is arranged in four sections: 1) an overview which includes anthologies, and essays and papers; 2) relevant publications of Linda Flower and John Hayes, the specialists in the area to date; 3) a representative sample of applications, models and continuing research; and 4) evaluative articles (pro and con) on the approach in general.

Overview

Anthologies

Fredericksen, C., & Dominic, J. (Eds.). Writing: the nature, development, and teaching of written communication (Vol. 2). Hillsdale, NJ: Lawrence Erlbaum Associates, 1981.

A collection of essays prepared from papers delivered at the National Institute of Education Conference on Writing in June, 1977. Includes cross-disciplinary research. Three essays are cited in this bibliography.

Gregg, L., & Steinberg, E. (Eds.). Cognitive processes in writing. Hillsdale, NJ: Lawrence Erlbaum Associates, 1980.

A collection of essays from the May, 1978 symposium, "Cognitive Processes in Writing," at Carnegie-Mellon University, Pittsburgh, PA. Subjects include models, development, constraints, business letters. Three essays are cited in this bibliography.

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Nystrand, M. (Ed.). What writers know: the language, process, and structure of written discourse. New York: Academic Press, 1982.

A collection of essays which explores what writers know and what they must learn. Includes cross-disciplinary research in psychology, linguistics, rhetoric, and artificial intelligence. Two essays are cited in this bibliography.

Essays

Barritt, L., & Kroll, B. Some implications of cognitive-developmental psychology for research in composing. In C. Cooper & L. Odell (Eds.), Research on composing: points of departure. Urbana, IL: NCTE, 1978.

Explains cog psych in an historical framework and suggests four areas of relevance for composing research: speaking-writing differences; concept of error; egocentrism; and audience awareness. Offers that research continue eclectically, drawing methods and paradigms from various disciplines.

Fredericksen, C., & Dominic, J. Introduction: perspectives on the activity of writing. In Fredericksen and Dominic.

Previews essays in collection within notion that writing is essentially an understandable process, not simply "magical thinking." Outlines essays within four perspectives: cognitive activity; form of language; communicative processes; and contextualized activity.

Humes, A. The composing process: a summary of research. Southwest Regional Laboratory for Educational Research and Development, Los Alamitos, CA, 1981. (ERIC Documentation Reproduction Service No. ED 222 925.)

Reviews recent theories of composing process (Applebee, Braddock, Emscher, Nold and others are mentioned). Cites hypotheses of other investigators. Offers diagrams of Flower and Hayes model. Includes extensive bibliography.

Lauer, J. Heuristics and composition. College Composition and Communication, 1970, 21, 396-404.

States that the profession needs to look to cog psych for further advancement in composing research. Provides bibliography of 194 publications in that field with suggestion that the profession investigate.

Flower & Hayes

Flower, L., & Hayes, J. Problem-solving strategies and the writing process. College English, 1977, 39, 449-461.

Presumes that writing is a matter of solving problems and offers specific heuristic strategies for analytical writing: planning and pushing. Also presents strategies for constructing audience. Concludes with implications of teaching process instead of product.

Flower, L. Writer-based prose: a cognitive basis for problems in writing. College English, 1979, 41, 19-37.

Defines writer-based and reader-based prose with reference to Vygotsky and Piaget. Describes function, structure, and style of writer-based prose, suggesting that basic writers produce writer-based prose. Concludes with suggestions for teaching writers how to process reader-based prose.

Flower, L., & Hayes, J. A process model of composing. Carnegie-Mellon University, Pittsburg, PA, 1979. (ERIC Documentation Reproduction Service No. ED 218 661.)

Consists of three papers: 1) proposes that protocol analysis can be used to identify writing processes; 2) examines hypotheses about constraints implicit in writing; and 3) presents a method for investigating writing processes.

Flower, L., & Hayes, J. The dynamics of composing: making plans and juggling constraints. In Gregg & Steinberg.

Discusses three constraints: knowledge, written speech, and rhetorical problem, identifying the latter as directing the whole composing process. Offers three plans to help deal with constraints: to do, to say, and composing.

Flower, L., & Hayes, J. The cognition of discovery: defining a rhetorical problem. College Composition and Communication, 1980, 31, 21-32.

Analyzes novice and expert writers through protocol analysis which results in a composite of the rhetorical problem: rhetorical situation and writer's goals. Explains difference between good and poor writers and concludes with two implications for research and teaching.

Flower, L., & Hayes, J. Uncovering cognitive processes in writing: an introduction to protocol analysis. Paper presented at the annual meeting of American Educational Research Association, Los Angeles, April 13-17, 1981. (ERIC Documentation Reproduction Service No. ED 202 035.)

Describes four methods for researching processes that take place during composing: behavioral protocols, two types of directed reports, and thinking-aloud protocols.

Flower, L., & Hayes, J. A cognitive process theory of writing. College Composition and Communication, 1981, 32, 365-387.

Discusses differences betwen stage writing models and process models. Explains model presented in Gregg & Steinberg (Identifying the organization of writing processes) for readers concerned with instruction and pedagogy, stressing description of processes rather than charting and modeling.

Flower, L., & Hayes, J. The pregnant pause: an inquiry into the nature of planning. Research in the Teaching of English, 1981, 15, 229-243.

Examines through protocol analysis what occurs when writers pause during planning stages of composing process and applies results to existing linguistic and rhetorical paradigms of planning.

Applications, Models, and Continuing Research

Beaugrande, R. de. Psychology and composition: past, present, and future. In M. Nystrand.

Offers contributions of structural and generative linguistics and suggests reconciliation in cog psych. Presents cognitive processing model of composing and draws on speaking-writing relationships to suggest pedagogical implications.

Bereiter, C. Development in writing. In Gregg & Steinberg.

Discusses hypothetical complete processing model in terms of four necessary components: executive scheme; genre scheme; content processor; and language processor. Offers model of skills system integration and suggests that children be tested out of school setting.

Bereiter, C., & Scardamalia, M. From conversation to composition: the role of instruction in a developmental process. In R. Glaser (Ed.), Advances in instructional psychology (Vol. 2). Hillsdale, NJ: Lawrence Erlbaum Associates, 1982.

Reports on research studies, their own included, in eight sections covering development and transition of children's oral language into written language. Includes tentative conclusions, pedagogical implications, and an extensive bibliography of processing research.

Bracewell, R. Writing as a cognitive activity. Visible Language, 1980, 14, 400-422.

Ties writing and cognition and demonstrates that problems faced by developing writers are metacognitive and metalinguistic in that they access knowledge they have while writing rather than master new ideas.

Brown, A. Knowing when, where, and how to remember: a problem of metacognition. In R. Glaser (Ed.), Advances in instructional psychology (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum Associates, 1978.

Centers memory research in domain of metacognition. Reviews current studies and concludes with suggestion that teachers be trained in metacognition awareness. Includes bibliography on metacognition.

Collins, A. Processes in acquiring knowledge. In R. Anderson, R. Spiro, & W. Montague (Eds.), Schooling and the acquisition of knowledge. Hillsdale, NJ: Lawrence Erlbaum Associates, 1977.

Presents Socratic method of teaching to include active instruction in forming and testing hypotheses, making predictions, and asking questions. Demonstrates method in tables. (Followed by discussion between Collins and L. Resnick.)

Lunsford, A. Cognitive development and the basic writer. College English, 1979, 41, 39-46.

Cites Emig, Vygotsky, Piaget, Chomsky, Britton and Polyani to substantiate claim that basic writers function below "formal-operations" stage of cognitive development. Offers developmentally-designed exercises and writing assignments for use in basic writing classroom.

Myers, M. A model for the composing process. School of Education, University of California at Berkley, 1980. (ERIC Documentation Reproduction Service No. ED 198 535.)

Presents model of writing process drawn from several existing theories. Includes related research and implications for instruction.

Nold, E. Revising. In Fredericksen & Dominic.

Presents and elaborates simple model of composing by citing various studies of writing processes. Also cites NAEP (1977) report, demonstrating four incorrect assumption about revising and concluding with pedagogical implications.

Olson, D., & Torrence, N. Learning to meet the requirements of written text: language development in the school years. In Fredericksen & Dominic.

Cites a number of studies which demonstrate that children must realign interpersonal and ideational language functions and must learn to relate sentence meaning with speaker's meaning. Argues that children's mastery of oral language at entry to school is not sufficient training for learning writing.

Rose, M. Rigid rules, inflexible plans, and the stifling of language: a cognitive analysis of writer's block. College Composition and Communication, 1980, 31, 389-401.

Analyzes writing processes of students, finding that weaker students have most rigid models.

Scardamalia, M., Bereiter, C., & Goelman, H. The role of production factors in writing ability. In M. Nystrand.

Investigates three production difficulties in young writers: short-term memory loss; interference from mechanical demands; and general language production discoordination. Concludes that all three are factors constraining writing production and offers three postulates for interpretation of results.

Evaluative Articles

Connors, R. Composition studies and science. College English, 1983, 45, 1-20.

Cites a number of recent criticisms of cognitive processing research and argues that scientific approaches to composition studies are pseudo-scientific.

Pradl, G. Methodological issues in writing research. In A. Purves (Ed.), Cognition and written language: a symposium. Papers presented at Symposium on Cognition, Pittsburgh, PA, March 15, 1979. (ERIC Documentation Reproduction Service No. ED 178 918.)

Questions validity of case study approach and points out dangers of juggling/controlling variables which might result in skewing of findings. States that composing research could benefit from a "comprehensive notational system."

Steinberg, E. A garden of opportunities and a thicket of dangers. In Gregg & Steinberg.

Summarizes findings of Gregg & Steinberg collection with praise of current models and warnings of uncritical acceptance of research. Concludes with suggestions for further research: writer- and reader-based prose; nature of assignments; peer reading and evaluation; reading; and cross-disciplinary design.